

Title (en)

HUMAN POWER AMPLIFIER FOR LIFTING LOAD INCLUDING APPARATUS FOR PREVENTING SLACK IN LIFTING CABLE

Title (de)

HANDBETRIEBENE LEISTUNGSVERSTÄRKER ZUM HEBEN EINES LASTES MIT EINER EINRICHTUNG ZUR VERHINDERUNG EINES SCHLAFFSEILES

Title (fr)

AMPLIFICATEUR DE FORCE HUMAINE POUR LEVAGE DE CHARGES AVEC DISPOSITIF ANTI-MOU POUR L'ELINGUE

Publication

**EP 1183206 A1 20020306 (EN)**

Application

**EP 00910217 A 20000217**

Priority

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- US 13400299 P 19990513
- US 14653899 P 19990730
- US 14654199 P 19990730
- US 44327899 A 19991118

Abstract (en)

[origin: CA2373247C] A human power amplifier assist device (10) includes an end-effector (14) that is grasped by a human operator and applied to a load (25). The end-effector (14) is suspended, via a line (13), from a take-up pulley (11), winch or drum that is driven by an actuator (12) to lift or lower the load (25). The end-effector (14) includes a force sensor (31) that measures the vertical force imposed on the end-effector (14) by the operator and delivers a signal to a controller (20). The controller (20) and actuator (12) are structured in such a way that a predetermined percentage of the force necessary to lift or lower the load (25) is applied by the actuator (12), with the remaining force being supplied by the operator. The load (25) thus feels lighter to the operator, but the operator does not lose the sense of lifting against both the gravitation and inertial forces originating in the load (25).

IPC 1-7

**B66D 3/18**

IPC 8 full level

**B66C 1/02** (2006.01); **B66D 3/18** (2006.01)

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